Harley Gaber–Interview #1, 2010-08-12
Introduction

American composer and visual artist Harley Gaber (1943–2011) created one of the most transformative works of 20th-century music yet remains little known. “The Winds Rise in the North” takes the listener through a spiritual journey by harnessing the complexities of close-interval timbral interaction in a way that had not been done by any other composer. The piece constitutes a milestone in the history of spectral music but has not been acknowledged in music literature. Titanic Records released it as a double album in 1976, and Pierre Boulez conducted a performance of it with the New York Philharmonic Chamber Ensemble in 1977. In the wake of his crowning success, Gaber stopped composing in 1978.

I was enchanted by “Winds Rise” on first hearing it in 1983. Over the ensuing decades I often wondered why Gaber had vanished from the music world, hoping to hear more of his music. In 2010 I came across his extraordinary website, which included a phone number. I called him, and we spoke for two hours. A few days later I was on a flight to visit him. I recorded eight hours of interviews (on an Edirol recorder, which he then gave me) and returned home with the joy of having new insights into music, and a new friend.

This is the text of the first interview, transcribed by Sarah McCauley, and edited by me. The transcription is verbatim, to capture more nuance. To hear the recording, please visit AcousticLevitation dot org.

In this interview, Gaber talks about his composition “The Study of Changes,” and discusses his music philosophy, touching on Giacinto Scelsi, Daoism, the quantum field, Jackson Pollock, Hans Hofmann, and his own vital exhaustion.

-----Robert F. Reigle, 2025-08-02

HARLEY GABER, INTERVIEW #1
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Robert Reigle: Okay, this is Harley Gaber talking with me, Robert Reigle, on August 12th, 2010. We're in Hillsborough, near San Francisco. And actually, this is sort of a—I imagine more of just sort of hanging out and keeping the recorder on all the time and then, you know, eventually going through it and extracting things. So this is more of a, sort of, formal kind of discussion. And so, well, I guess probably what I would use this for is to write an article maybe about, especially talking about ritual, or something like that. And I was thinking about writing it for the ethnomusicology journal, *The World of Music.*

Harley Gaber: And you might consider writing some of this in the notes for the CD.[1]

RR: Yeah.

HG: There might be a separate section.

RR: So maybe we should start out by stating the story about the CD.

HG: Of the new one ...

RR: The new one, yeah.

HG: Well, where I would start, the phrase—as I was walking the dog, the phrase came to my mind about beginnings, and it would be redundant to say new beginnings, but—beginnings. And my thought about this new CD, the music on it called "Turning Music," and it's improvised keyboard music done on an iPad. And I was thinking as I was walking the dog that I would begin by saying that for those people who are familiar with my older music, which is alternately referred to as spectral or minimal or drone music, that the music on this new CD, the "Turning Music," was improvised on an iPad keyboard. So it's essentially a keyboard work, piano work, but at the level of the iPad application that I used, which was called Smule, spelled S-M-U-L-E. And I, well I know people will be shocked, you know, who do know my music. The things that I would want to stress, and I'm stressing it to myself more than to them I think, is that it's not a revisiting of music that I did before my music became what it was, that I have become known for. You know, in other words, when I began composing as a teenager, but that rather— so it's not a revisiting as much as it is an extension of my musical sensibility that has been transformed to sound differently. So that I'm not using the same expressive means or the same musical means, the same musical material, but what is—the extension is of my musical sensibility: my sense of

[1] HG is referring to "Turning Music I and II," which was an initial attempt to fulfill a commission, but was rejected in favor of the six works that appeared on the Innova Recordings album, *In Memoriam 2010* (released in 2011). At the time of this interview, HG had expected Innova to eventually release "Turning Music" as an album, including liner notes. In 2012, Innova posted "Turning Music I and II" along with three other pieces, at SoundCloud, under the title "Harley Gaber (late works)," but did not release it as a physical disc.
https://soundcloud.com/innovadotmu/sets/harley-gaber-late-works

phrasing and pitch and rhythm. And this also marks the first time that I've really, seriously improvised on a keyboard. I've improvised on other instruments in an ensemble—

RR: Oh, which instruments?

HG: There was a, we did the Stockhausen—years ago, up in New Paltz, New York— *Aus den Sieben Tagen*. And I think it was a reed instrument, it might have even been a bass clarinet, I don't even remember, but it was a group improvisation. And the way this whole thing came together is, you know, very personal and it has really nothing to do with music. That I have found myself over the past, well, probably five or six months, uh, that I in some way created my own perfect storm that involves psychological, emotional, financial entanglements that essentially led to, effectively, burning out my brain. So as I've come to these new pieces—

RR: Wait, let me just interrupt, so by perfect storm you mean a storm where two storms come together and create a gigantic storm—

HG: Well, yes, just like in the book and the movie *The Perfect Storm*, where the conditions are such that the worst-case scenario occurs. And perfect in that sense means the perfect disaster. And so, because of all the work I was doing prior to the first of this year and going into the first of this year, I created my own perfect storm and the effects of it took a few months to become apparent to me. But the effect ended up being one of, essentially having a burned-out brain, meaning that I've blanked out. And the work I was doing just got discontinued and, prior to doing these improvisations under the general title of "Turning *Music*," I did a couple of very long pieces, one in memoriam to Kenneth Gaburo and another one an homage to David Tudor which was done on a real keyboard. And those were long pieces, and they were, I don't know how to say, my reaching to try to keep myself going, to do something that I would not have dreamt up as a piece of music in the way I used to. In other words, I came to those pieces to communicate, to create something that related to some other people. And this is one of the main differences in where I am at this point, that I'm, what I've done is readjusted my perspective on my life and realized that I've really gone as far as I can go—whether it was film or art or music from the past—and I have to change my perspective and I think these new pieces reflect a distinct difference.

RR: And those other two pieces are also improvised?

HG: No, the Tudor piece was improvised but it was multi-tracked, up to 12 and 15 tracks, and it's really dense and it's quite bombastic and it's an hour-long improvisation. Again, I did that not to entertain myself, but I think it's more desperate than that —it was reaching to do something, to engage my mind. Because the effect of what has happened to me—it's actually called, the condition is called vital exhaustion—is that my mind has simply blanked out in a particular way that I've never experienced before and it has put me, on the one hand, in a very good place: that I'm in the present, meaning that I can't see any future and the past is not involved. And so, what has happened is that I feel like I've been given the gift of getting a glimpse at some other perspective of expressing something that is much more personal and unmediated with respect to all of the things I've talked about, about my music in the past, relating to Daoism and Buddhism and Zen and physics, quantum physics. I find that all of that has been taken from me through this

experience and that what I'm really left with is my musical sensibility. And so, in doing these pieces, the one in memoriam to Gaburo involves some of his music and the challenge was to see if I could integrate his music with other music: mine and others'. And so there's quite complex … what is the word I want?

RR: Interrelationships?

HG: Ah, no, complex in the sense that it's multilayered and there's all these things going on. So it's in two parts and the first part involves things that sound sort of Cageian, that things will come in without reason, but there's a reason for all the things coming in that relate to Gaburo and to myself and to things that we had talked about over the years. And the Tudor piece, I just got it in my mind to try doing something on a keyboard which I never really had done. I did write some keyboard music in the 70s and there was an ensemble piece called "October Piece" that was for percussion, vibraphone, and piano. So that I'm not—and I composed at the piano in terms of getting the chords that I wanted, the intervals and whatnot, but I've never really improvised with the keyboard. So that this new music, "Turning Music," is really a turning point for me, it's a beginning and it's really not a revisiting but as I said, it's an extension from where I was. Now, people might hear it as something coming out of left field that is really totally different, and I don't really see it that way. What I can say about the music, and it's true of all my other music, is that the "Turning Music" represents exactly where I am at right now. And the fact that I did it on an iPad in a very simple application speaks to the fact that I have, in a way, I don't know how to say it, I've been reduced to these means of just sitting down with an iPad with a little play keyboard and began these two improvisations without any real idea. There was only one idea for the second piece, it was a minor third, and there was some repeated figure that began the first one. Then my experience in doing the improvisations, they were done in one straight take, there's no editing in them. And it was, uh, not, I wouldn't say frightening—but I really felt for the first time, compared to composing, that I was working in real time, and I had to think quickly and I had to retain the pitch areas I had been through, the kinds of configurations I had made. So the two "Turning" pieces are quite different but what is similar between them is the fact of, that they're quite controlled and they're quite specific and that I was able to make a music that is more unmediated than any other music that I've ever made. In other words, I didn't have the luxury of trying a chord and finding the right note and getting the right duration, I had to react quickly. And that's something that when people listen to the music that is familiar, the music that's out on CD or they've heard in performance, that is not at all part of that music—this whole idea of my being with it in the present moment. I try to make my music *sound*, and I think I succeeded at making *it* sound: that *it* was in *its* present moment. But I wasn't necessarily in that moment when I composed it, I had enough time to reflect upon it as any normal composer would. So in that sense these new pieces, while they might sound some kind of retrograde in a sense, and harken to other people's music that I'm not even aware of, for me it serves as a beginning and I can see out of this how I could take what I've done with this music and expand on it in many ways—either in the computer with manipulating the sound, multi-tracking it, using other people, and I would be interested in actually trying that, to involve other people with it.

RR: Yeah, I'd mentioned earlier: the first time I listened to the first piece, the beginning of it sounds like it could be Scelsi's piano improvising.

HG: Yes, well that was a shock to hear, because number one, I don't know any of Scelsi's piano music, and as you've pointed out it was done somewhere in the 1950s. And I did know Scelsi, and I met with him in Rome and spent time with him and at that point he had not reached the height of his career, this was just before he started getting performed and before he really started writing the pieces he's become known for. So I was shocked to hear this because, recently I listened to his music, after you and I talked I went back and listened pretty carefully, and we had a long conversation about his music.

RR: About the Edition RZ CD, right?[2]

HG: Yeah, all of those pieces. And I, in some of the reviews for the *Mt. Fuji* album and even perhaps *Winds Rise in the North*, and then the new CD from Edition RZ, which includes "Sovereign of the Centre" and "The Realm of Indra's Net," the terms "spectral" and "minimal" and "drone" are used over and over again. And the name Scelsi is involved quite frequently in a lot of it, especially the—well not the "Mt. Fuji" piece—but "Sovereign of the Centre" and "Indra's Net."

RR: And "Winds," probably.

HG: Well yes, when that was reviewed, that was mentioned then, but this is this time around with the new CDs. And what I explained to you, Robert, was that my music, in my mind, has really nothing to do with Scelsi's music and its intention is extremely different. You know, we can talk about that, what those differences are. And this is not in any way to criticize or denigrate Scelsi. In other words, when people mention his name, it seems that they are focusing on a particular aspect, one very narrow aspect of his music and my music that are similar, and that aspect is basically either clusters or single pitches that are played on different instruments with slightly different intonation. But beyond that, I see absolutely no similarity in our music, and his intention seems, as we talked on the phone and I said it's an invocation of sorts, it's a shamanic invocation of the power of sound and the power of vibration. And that, I think, that phenomenon occurs in my music, but it's not an invocation; what I'm doing is more seeing my music from the point of view of being modelled after nature. I see Scelsi's music as being modelled after some kind of cultural ritual or artefact, I don't find anything in his music that strikes me as natural. And by that I don't mean it's unnatural, but I mean natural with respect to nature. Where in my music, I find a lot of commonality, that's how I conceive of it, whether it comes off that way I'm not really sure. But in his music I see it very much as a human construction that is meant to, not impress *upon* people, but to invoke in people the understanding of the power of vibration of sound, in a way that's not very different from the Buddhist chanting and the Buddhist music—done through repetition and a very controlled pitch repertoire, or pitch palette I would say. That's where I see Scelsi more aligned with, and especially—if I'm pronouncing the word right—*sham* [sic], the Buddhist instrument, the long horns.[3] Even when he's doing string music it sounds like

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[2] *Giacinto Scelsi*. 2002. Berlin: Edition RZ. Ed. RZ 1014. Includes "Pranam I," "Anagamin," "Quattro Pezzi (su Una Nota Sola)" "Quartetto N. 4," "Okanagon," and "Quartetto N. 2."

[3] Six-foot long horns typically referred to as *dung-chen* (https://namgyalmonastery.org/ritual-instruments/) appeared on the first album of Tibetan music that was widely-available in the United States; David Lewiston calls them *radong* in his liner notes (*Tibetan Buddhism–Tantras Of Gyütö: Mahakala*. 1973. New York: Nonesuch Records. H-72055.)

that to me and there's a certain insistence and repetition of invoking this power and through it I think there are many people who listen to Scelsi and are drawn to his music, who actually respond to this invocation, so it's as if they themselves are chanting their own om, but Scelsi is in fact doing it for them through his music. And that's something I've never been interested in. So it's not a criticism of what he was doing at all, but I think I'm trying to imagine how people react to his music, you know, other people than me, that they somehow identify with the power he releases and invokes. Whereas what I'm after is the passage through time, as my music goes, that what happens is not, wouldn't be different from being on a walking journey or climbing a mountain or walking through woods. Where there's a cumulative experience of the details and one then starts seeing how nature fits together in a particular way, as opposed to a cultural invocation of the power of nature that, you know, for many cultures was so—for the Egyptians the sun had this importance, and the Mayan culture also, I'm thinking of—you know, I mean all cultures invest in various natural phenomena a certain power. And for me Scelsi was tapping into that impulse to culturally capture this power and bring the power into the culture. Where what I'm trying to do is take people out of the culture so that they can actually see how nature works and then bring that perception back into the culture. So that's how I would describe that difference.

RR: Mm. Okay.

HG: You follow?

RR: I think so. Can you just repeat that last part again?

HG: Okay, so what I'm saying is that I have in a way modelled the way in which my music unfolds, and the content of the music, you know—just in musical terms of harmonic content and rhythmic content and timbral differences—that I have modelled it after natural processes that I can either perceive through my senses and reflect upon in my mind, or things that I'm not aware of or conscious of that are existing in the quantum world that is not perceivable, that we are part of. And I have tried to capture or tried to present, not represent, but present a like experience. Not of being on a walk through the woods, not that experience, but of how the system of nature actually works on a physical level and how things interact and how one thing affects another—I'm using that as a model of an experience of experiencing nature, of being part of nature. So that my hope had always been—in the old days, you know, in the 70s when I really sort of understood what I had fallen upon, that I had figured out—is that I tried to create experiences that had similarities with the way in which nature works. In other words, not the way it *looks* in terms of a landscape but the way it works, actually, and then, the hope was that the people who would hear the music would be able to take that experience back into the culture and it would affect them in a certain way, that they would find a certain peacefulness, they would see how they personally were part of this whole system, this quantum system that we are part of. And I make that distinction with Scelsi, of him taking this power that he perceived in nature and in vibration and sound and actually invoking it by making a music that resembled not how it worked but the *power* of its working. So that there's a—that's why I use the word shamanic, to me his music attempts to conjure up and replicate the *power* of sound and the importance of the power of sound. Whereas what I was doing back then was not trying to replicate it or invoke it, but invoke the experience of experiencing that power and letting it go through you. Not being

presented with it as almost a religious ritual-type situation. My music had none of that in it. I hear some of that in Scelsi. I don't know if this is, is this any clearer?

RR: Yeah, can you try to give an example? You said it's about the way nature works. You want the listener to work the way nature works, is that—?

HG: Well, the first perception would be that we are not separate from nature. So the idea that we're alienated or that we're separate is an illusion, and that our structure, in other words, we are as much a part of nature as the tree is. So I'm not making that distinction of nature that nature is the tree and we are different, I'm saying we're all—we have all been created out of the same system. Our problem is that we don't see it that way. So we say we're looking at a landscape painting and it's there and we're here. Or that we are out where that landscape painting was painted, and we see the same scene and maybe we are moved to paint it or photograph it; what I'm saying is we are part of that system we are looking at. And as being part of the system, that means that we have to abide by the rules of, whatever we are told those rules are by the physicists and the scientific people and then also the religious and spiritual people; that we are *part* of this whole thing. And I think Daoism comes very close to—that's the expression of that, of us adapting the "watercourse way," as Daoism is sometimes referred to, that we behave in—not only in consonance—but we mimic the behavior of nature, so we grow like the tree and if there's another tree planted next to that tree that crowds it out, we have that same kind of experience with other people, you know, when we're put in close proximity. So my intention was, you know, and maybe it was what *I* needed to do, was to feel that I was really part of the whole system.

RR: Part of nature?

HG: Yes, in other words we're all in the same field. The trees and us, we are all in the same field, and it's only that we appear different. And we have a different structure, that we appear different, and that we have certain capabilities that we think the tree doesn't have. Nonetheless we are all in the same system. There are not different systems that are creating us and the tree. And in that sense, I was trying to replicate, I don't know how to ... not describe the system but replicate moving through the system as part of the system, as opposed to being a bystander. So in physics, with Heisenberg's uncertainty principle, that comes down to how do you observe something without changing it, in other words you are part of what you are observing, and your observation is part of the conclusion that you're coming to and there's no way to step outside and change that. And most of us spend most of our life thinking that we're not connected to each other and to nature, and feel alienated when in fact this is a physical impossibility, it's just not the case. So that was my feeling and all I can say is that it's something that was important to me, to feel connected to this quantum universe. And what has seemed to have changed is that, since all of this has happened to me this last year, I'm still not seeing it differently, I'm still including nature, but what seems more important are people, and somehow changing ... understanding the quantum relationship between people. Heart to heart, and how important the heart is. And to speak from the heart as opposed to speaking from some conceptual position that addresses acoustics, addresses quantum physics or whatever. And I think that's what this switch in me represents. It's the same thing but the focus now is to try to see, say, the spectral elements of the heart, versus the spectral elements of a particular instrument. And to understand the shadings of

the heart, to understand what that means in a much more subtle and intricate way. And how the fact of the heart and its—how it works for us, can be seen in this larger way, in this quantum way. Now, before I never thought of that, it was more of a conceptual, mental, either transcendental or spiritual position coming from Eastern disciplines; that's how I thought about it. The heart was really not involved in that music. And with "Mt. Fuji," I mean, the title is "I Saw My Mother Ascending Mt. Fuji," that was the beginning of seeing some different narrative that I could possibly follow in the music. I stopped composing music because I had pretty much gone as far as I could go with this other perception about the quantum universe or parallel universes or multi universes. And in returning to music after doing film and all the art I've done for over 20 years, I'm much more focused on people, but still within this context that I wrote my other music from; in other words *that* really hasn't changed. So it's not that I've divested myself of my interest in the quantum world and how that functions, but now it's a much more subtle distinction of how does the heart function in relation to the quantum field, the way one can talk about reaching a still point, you know, in Eastern disciplines, that now I'm interested in the spectral differences in the heart. And so I basically have transposed all of what I was interested in *to* the heart, but I'm still looking at it from the same view of, well, if the quantum field behaves this way, how does our heart react to that and how can our heart affect the way the quantum field operates.

RR: Can you say what the quantum field is?

HG: Well, I'm using the term quantum field for lack of a more precise term. I don't know how to say it, you know, it's something similar to—and I'm not comparing myself—but when you talk about Einstein you talk about his field theory. So it's a theory that covers more and more and more and more. And so when I talk about quantum field I'm just really talking about everything ... that we can see and what we can't see, I'm talking about the whole universe or the universes. And I am not talking from the point of view of a physicist, I'm talking from the point of view of a person who is aware that what we see and ourselves and how we feel and how we behave and how we move and how we react—it's all part of this quantum field. And I've always been fascinated, and I think eventually—and I know there are other people fascinated by this—but I think eventually what will become clear, is that all the emotions that we experience can be reduced down to some equation. It can be explained in exactly the same way as other phenomena are explained, and I've always believed this to be the case, but I've never explored it. So my exploration in my prior music was what was inside the sound, what were the spectral components of the sound, and how could you, in effect—and it was much harder in the old days without the computer—but how could you manipulate the DNA of a sound? How could you manipulate the upper partials of any given pitch? And this was all very difficult; it's become very simple with new technology. But I was investigating what was in the sound, and to see the richness of what was in the sound was comparable to the physicist going from the 19th into the 20th century, seeing smaller and smaller structures, into the atom and then beyond that, and it's going much further than the atom, that's a huge structure compared to what they're talking about now. And that is what I did with my music, I in effect put my music under a microscope, or a spectrometer, not a microscope, is a better image for me. And when I slowed it all down, then I started to see that there was all this action going on inside something that was apparently standing still. I'm saying that that's exactly like seeing a person sitting still or sitting in meditation, and to imagine that there's nothing going on in that person is to imagine there's

nothing going on in a sustained violin sound. And that was my interest and that's what drove me. What has shifted is only that I've shifted my interests more to the human and the human heart. But to try eventually to be able to see it in as clear terms as I saw the physics of the acoustics of the sound that I was working in. Is that ...?

RR: Yeah. And by human heart do you mean emotion or spirit or …?

HG: Well, I'm just learning. I will say that. I mean I'm just exploring it and if I systematically explore it the way I did my music, you know, down the road I could give you a much more erudite, eloquent answer. But my feeling is, and this came out of a conversation with someone that I know, is that what goes on in the heart is complex in a way what goes on in the mind is complex. And I never gave this a thought, I just never even thought of it that way. And I think I have thought, in the past, of the heart as being compassionate, of being wounded, of being shut off, of being attached, in those general kind of ways. What I'm suggesting is that what might be missing from all of what I had been looking into—it's not that what I was doing was mistaken or misguided—I think it was incomplete. And my life now has come to a point where I'm no longer able to get completely excited about just creating interesting sounds the way my older music was for me, but that I want to try to actually include the workings of the human heart at a much more sophisticated level than talking about, you know, just emotions or a broken heart. I don't minimize those things, but I'm talking about something much more involved, in the same way that people involved now in neuroplasticity and the hardwiring of the brain and how the brain can be changed, and the fact that the Dalai Lama is even interested in neuroplasticity and trying to see if meditation and the chanting that the Buddhists do, and all the rituals and readings of the Buddhist religion, can affect the brain and can affect the hard-wiring of the brain. So he's interested in, and he has met with people who specialize in neuroplasticity and hard-wiring of the brain. That's something that, you know, I say I'm interested in, I'm interested in everything. But, more importantly, for me at this point, for whatever reason the focus is not on neuroplasticity of my brain but it's on the heart, and it's really an investigation to see what the riches are, of the heart that transcend the way the heart is thought of. So, you know, when we talk about "this is heartfelt" and "from the bottom of my heart" and "I have heartache" and "heartbroken"—I'm talking about something way beyond that, where the possibility that the heart is doing things that we don't even imagine it's doing; it perhaps is able to think, it perhaps comes up with ideas, it perhaps directs what we do, not just our mind but in consort with the mind. That in other words, there is some kind of systemic connection that is going on on the level of mechanism at which it's working, and this is something I simply haven't experimented with. Now, the question I would ask myself if I were talking to myself is, what would I expect to find and how are these new improvisations anywhere in the ballpark? Is that a fair question, that you would be curious ...?

RR: Mm, yeah. Yes.

HG: And my answer at this point can only be this: that for me to have been reduced—in my mind it's a real reduction—my whole skill set of tools has been taken away from me. So I'm not starting all over again, because I haven't lost my musical memory and my musical sense and my sense of phrasing and whatnot, but I have lost the interest in conceptualizing what I'm doing before I do it. And, I mean, I'm blanked out and I'm not able to do that, so I can't really address

the outcome of this exploration but I have the feeling that if I were to continue, which is not anything I can guarantee or insure at this point, if I continue and these two improvisations of "Turning Music" are just a beginning, I can already see a complexity that could be done with more complex means than an application on an iPad, that would lead to a very sophisticated expression, whether it's musical or some other art form, or some form altogether different. How can I put it—I have no idea what the universe has in store for me on this case. But that I'm imagining that there is a complexity there, that rivals the complexity of the mind and it really, I guess what I'm saying is, that I think it's the combination of the mind and the heart which makes the system vibrate and really resonate. And so now at this point it might be too late in my life that I say okay, now I have to explore my heart. I've explored my mind, I've burnt it out, I've used it, I've done well by it, it's gotten me through, but it's out of balance. And what I believe to be the case is that there's some reciprocity and some kind of collaboration between the heart and the mind, so that it's not the mind just directing the heart but it's frequently the heart directing the mind, and that there's a power exchange, a *current* exchange, where things can go one way and then go back the other way. And that's the connection that I'm really curious about. I'm sort of, I feel confident about my perceptions as they were revealed in my music and the things I used to talk about, but as I say, this is all new, you know, it's new territory for me.

RR: Mhm. Maybe in order to put a little more perspective on this, you could say something about how you ended your last compositional phase? In 1977 you did this multitrack cello piece ...

HG: Oh, okay. Yeah, I can talk about that and, you know, before I describe it—the importance of it was that when I heard the piece done, and I will go on to explain it, it more or less finished me off with music because I had the realization, when I heard the dress rehearsal for the performance, that there was no possible way that I could hear this music. I could create a situation because … In other words, I had figured out a way to create a situation that I knew what the outcome would be. And by tweaking it and adjusting as I went along, I knew that if I put the right things in place something would happen in a particular way. So with that piece I did that with pre-recorded cello and it ended up we had about eight or ten tracks of cello and we used Cage and Tudor's matrix mixer, which was a 64 in and out mixer that maybe Tudor had put together for "Birdcage."[4] And the idea was that there was a live cellist and then there was the pre-recorded material, and the pre-recorded material was being routed through this matrix mixer so that you could put one track through all the speakers, or you could put all the tracks through one speaker, or you could move the tracks around the room, however you wanted. And in the dress rehearsal it went off, I don't know, perfect. And I don't know if it would ever—you know, could be better. But it went off in such a way that it really forced this realization that, number one, it was the most profound musical experience *I* had created, you know, as I heard it. And number two that, I've mentioned already, there's no way in the world I could possibly hear this and notate it because the complexity, the—I'll use the term the spectral complexity—of it, through the overtones that was calculated all the way through as we recorded the tapes, was so complex, and it ran the whole gamut of the overtone series from the fundamental all the way up to microtonal partials, that given the randomness which was a result of the bow pressure and the

[4] The matrix mixer had 8 inputs and 8 outputs and was used in "Birdcage" to distribute groups of 4, 6, or 8 tapes (randomly chosen from a total of 12 tapes) to the same number of speakers. See Lowther, Chad. 2016. "Birdcage." https://www.barzakhmag.net/new-blog/2016/4/18/john-cage

bow speed of the cellist who recorded them, there's no way that I could possibly compose this or figure it out in a way that would not misrepresent or really .... well, the term that comes to mind is “real imitation leather,” which used to be a funny line they used to use on television, they called it “real imitation leather” and anything I would have written would have been real imitation music of the spheres.

RR: Isn't it somewhat similar to, like, in Luigi Nono himself doing the electronics for performances of his music, something like that?

HG: In what way? Tell me.

RR: I mean, so, to be able to control that particular performance in that moment?

HG: Well, I'm not talking about anything that has to do with the matrix mixer or anything like that. What I'm speaking of is that when we did the original tapes, I calculated what would come out on those tapes. Some of the tapes were slowed down twice, some three times, but I think twice because the lowest pitch might have been ... it might have been a D off the C string at the bottom of the cello. So now if you lower that twice or once, you're getting below the threshold of hearing.

RR: So when you say calculate are you saying working by ear or working by numbers?

HG: No, in other words, we recorded certain things and it was after I had done “Indra's Net” and I was completely aware of bridge harmonics and I was completely aware of all of that. So as we recorded all of these tapes, I was thinking ahead, “okay so we'll choose this pitch, and this is then going to be lowered one octave, this is going to be lowered two octaves, this will be this pitch D, this will be E, this will be E flat,” and so on. And I calculated that I would then, off all this material, by lowering it various octaves or leaving it at the octave it was recorded at, that what would happen is that I would end up with these particular pitches because they would be part of the overtone series generated off any particular fundamental. Then what could happen was the piece could be shaped, and this whole piece was done, it was called “The Study of Changes,” and it was a graphic piece, so there was no music. It was a pen and ink drawing on rice paper and it was very delicate figures, and this was, in other words, a realization, as they would say, of a graphic score. So in other words, there was no music and so we just started out recording these tapes. Now on one of the tapes there was a, I think it was off the D on the C string, I don't remember the pitch but—I've written about this somewhere else, in my *Die Plage* material that's on the website—I bring this piece to say something that relates to the art project *Die Plage*.[5] There was one track that had nothing but this severe attack from the frog of the bow and it was a crunch, and the bow was drawn crunching the string for maybe six inches, but as hard as he could crunch it, and as loudly as he could do it, he did it. And then the bow was slightly—the pressure was lessened and he would go on maybe a 20 to 30 second bow and it would turn into bridge harmonics. Now, over the 52 minutes, I think it was, of this piece, this crunch occurred every, I don't remember, maybe 17 times. So I'm thinking it was three ... three times 17—

[5] His website included a six-part chronology of *Die Plage*, a ten-year project wherein he produced 4,200 canvases. It has been shown in six major exhibitions as of 2025.

RR: Yeah that's right.

HG: That comes pretty close, yeah, so that's what it was. I haven't thought about that for years but that's what it was. So that was one tape all by itself, and the thing is that it came in exactly at the same interval every time and the effect of that was that you, on the one hand, dreaded the fact that you knew it was gonna happen but even worse, you dreaded that it wouldn't happen. And I hadn't really calculated that particular experience. But that was going on while all this other was going on and all this movement, and there were large movements and local movements, things going on, and the music was fluting through the overtone series on different tapes, and different parts of the series. And I said to other people that this, I truly believe, was the piece that Kubrick wanted for 2000, what was it? Was it 2001?

RR: Yeah, that's right.

HG: 2001.

RR: *2001: A Space Odyssey*.

HG: Oh, right, okay. I'm thinking of 9/11. At any rate, the fact that he chose Ligeti, Richard Strauss, and Johann Strauss was, to me, the proof that this was what he wanted, because what I heard in this piece was all of that. In other words, there was the clouded atmosphere of Ligeti, there was the chromatic work of Richard Strauss, and there was this graceful, lyrical aspect of the Strauss waltzes. And in my opinion, this really happened in this piece, because it went through different segments of the overtone series and it really encompassed—I don't think it would have worked for his film, that's not what I mean by it was the piece he was looking for, because he used those pieces separately at different points. What I'm saying is this really encompassed—and again now I'll go back and say the quantum field—this piece encompassed the quantum field … in that it went—kept fluting up and down through the overtone series, and it kept including more and more and more and more, and eventually the effect is [it] included the people who were listening to it. So, everything started swimming together. And in the dress rehearsal there were only very few of us in there, which always seems the best way to hear something, when there are very few people around. But I really felt totally, I was gonna say vindicated but there's nothing to vindicate, I felt totally flattened by what I heard and totally satisfied and like I have already told you, I saw that I could not write this music. And then someone might say, well why do you have to worry about writing it? You just set up the situation and do a different situation. And what I'm saying is that with music like "Winds Rise in the North" and even "Sovereign of the Centre" and "Indra's Net"—not so much "Fuji" but a little bit, and much less on these new improvisations—that you can set it up so you have different pitches and slightly different things happen, but basically you are capturing in one way or another the workings of the quantum field. And it wasn't that it was so perfect that I said okay, I've done this now, it's time to go play tennis. But I couldn't see repeating myself anymore. And this is what happened to Pollock with his painting. And his painting was very much the way this cello piece worked in that he didn't know what he was doing when he did his paintings; he just started doing them and he followed and they either worked or they didn't work. But there was no real idea of it. And what happened, and he was told by another artist Hans Hofmann, that—Hofmann said you have to work from nature—and Hofmann didn't speak very good English; he's German, he

was a brilliant teacher so he would have not just said, the way he is reported to have said by Pollock's wife: “You don't work by nature.” And what he meant by that is you don't—it's not conceptually based on a system, what you're doing, you're just doing this thing that is beautiful. He said, because you're not working from a system you are doomed to repeat yourself. And I'm now saying, he didn't say it—and what Pollock's supposed remark was, “I am nature.” And I sort of agree with that. But I agree with what Hofmann was saying, that if Pollock couldn't discriminate one structure from another—he could use different colors for paintings, and there's variations in his paintings—but he himself understood that he was repeating himself and he kept saying “I won't repeat myself” and that's how he painted himself out. That his pieces were not—he wasn't controlling how they ended up from where he started; he made them *work* the way they ended up. In other words, that when he was tuned into what he was doing, he was able to react, just like I did in the improvisations, he was improvising. So something would start developing, he'd go after it. If, in his paintings, he muddied it and put too much in, they were finished, he had to throw them out. There was only a certain point where they had to keep their transparency and where the skeins actually interacted, where they weren't muddy. And when he was tuned in it worked, and when he lost control he had to throw the painting out. So he himself, and these are not my words, these are his words …. So I did a film, it's a couple hours long, on Pollock. It's three actual DVDs. And I took all of the documentary material and all of—I looked through—I had all of his paintings. And I, when I was younger, painted like Pollock, when I was in high school. And I didn't paint like him to copy him, I painted like him for the very reason he did, because he couldn't paint paintings the way other painters were painting paintings. He didn't have that control and he had really no subject matter that he believed in, and this led him to do what he did. And I think with me with music, I really didn't have musical music ideas, I had ideas of this experience. And Pollock's failing was he was not part of the art world; he was doing the dance of the Wu Li masters.[6] And had he been, you know, listening to Stockhausen or Schoenberg at that point instead of Roy Eldridge, the jazz trumpeter, and saw what he was doing didn't belong with the other artists, then he might not have ended up the way he did. But I think he didn't see it and the people around him didn't see that what he was doing was not painting, he was doing some kind of a dance that replicated the action of nature. And so when he said to Hofmann “I am nature,” he might have said more accurately, “I am part of nature ... and all I am doing is I'm trying to be an extension of nature and I'm trying to let the paint be an extension of me, and when I get it right, it sits on the canvas the way a sunset sits in the sky, or the way the tree sets in the ground.” And I felt that I had done something like that in this cello piece and that, in other words, I figured out as well, to set up a music situation that would get a certain result, as Pollock figured out a method of painting that would get the result he got in his drip paintings. But I had the same problem, and the difference was, maybe because I knew Pollock's story, I saw that I would be repeating myself and I saw that I couldn't control this, I can only set up the situation and make it work. And I knew I could do that, so then to go back and do another piece like the cello piece, I have no idea why I would do that. Then if I thought okay, well maybe I'll write something written with this cello piece, and then I could start writing with this kind of music, and that this music would then become a background or a ground within which this thing could swim, like “Mt. Fuji,” where I have an electronic ground. I wasn't there and I didn't have a computer and I didn't have the means to do this easily and had I, then maybe I would've still stayed in music. And I would've then been creating electronic grounds rather than going through all of this with the tapes and the cellos and all the work. And then I could've maybe made the

[6] Zukav, Gary. 1976. *The Dancing Wu Li Masters*. New York, NY: Morrow.

pieces more specific and I would've continued. But at that moment, that was 1977 or 8, none of that existed. I mean we recorded these things and we were using Moog's original modules that were five feet high, that were plugins from one module to another, the original things that he had made before he made his synthesizer. So that's what we were using in the studio to process any sound, it was that primitive, and I just felt that—I also felt that I had gone so far into the quantum ether, that I was literally strung out and was being held by a very tenuous tether. And that I had neglected myself and I had neglected my physical self and my emotional self, all to accomplish this spiritual self. And I think that's something I must mention somewhere else, but that is part of the reason why I bailed on music at that point. Because I really felt with the cello piece I had created something and I couldn't do better and it was no longer human, it was this physical thing that was on its own. And this is where I would make the distinction to, you know—to hook it into Scelsi—that I created the situation as if I made an atom bomb. And I saw a way to unlock the energy and it worked. And so what came back at me was as much of a surprise as if I was viewing some kind of volcanic eruption or tsunami or whatever, some natural, powerful experience. And it wasn't a question of me, the composer, invoking this, it was a question of me setting up the situation and say, "okay, you've set it up, let it go." And what came out came out. Now the performance that evening—I heard part of it, I was outside most of the time—I was blown away by the dress performance, so the performance was meaningless to me in any case. But I don't even think it reached—it didn't happen the same way. You know, what I did hear of it, it was not the same.

RR: And it wasn't recorded?

HG: I'm sure the performance was recorded, yeah, but that tape is probably one of the ones I threw out in the garbage can three weeks ago. But I've never—I maybe heard that tape once. But it was just a single—it was either one or two mics in the middle of a—it was at State University of New York at Albany and it was in the lobby of one of the buildings and so the lobby must have been, oh, at least easily 120 feet by 40 or 50 feet and we had the speakers all around the room and people were just lying on the carpet so that I don't even remember where the microphones were; they might have been in the middle of the room. And the microphones missed the impact that I heard earlier, and I don't know if it was the performance or what. Can we—

RR: Yeah, let's take a break.